

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent application of:

Applicant: Dieter Döhring

Serial No: 10/595,215

Filing Date: March 24, 2006

Title: **DECORATIVE PAPER WITH SPRINKLED CORUNDUM
COATED WITH AN ADHESIVE**

Examiner: Brent T. O'Hern

Art Unit: 1783

Docket No. BARDP0126US

Confirmation No: 4813

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

Applicant requests review of the second rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal, and the review is requested for the reasons stated on the attached sheets.

In the event any fee or additional fee is due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (under the above Docket Number).

Respectfully submitted,

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ADDENDUM TO PRE-APPEAL BRIEF REQUEST FOR REVIEW

The Examiner has reopened prosecution and has issued new grounds of rejection. Specifically, claims 2, 4, 10-11 and 17-20 have been under 35 U.S.C. §103(a) as being unpatentable over Döhring (WO 00/44984) published August 3, 2000 with evidence by Döhring (US 6,835,421), in view of O'Dell et al. (US 5,545,476), Mafoti et al. (US 5,804,618) and Shirono et al. (WO 01/21529) with Shirono et al. (US 6,994,834) interpreted as being the English equivalent of ('529). The Examiner has also rejected claims 2-4, 8-11 and 17-20 under 35 U.S.C. §103(a) as being unpatentable over Döhring et al. (US 2003/0138600) in view of O'Dell et al., Mafoti et al. and Shirono et al. The Examiner has rejected claims 8-9 under 35 U.S.C. §103(a) as being unpatentable over Döhring (WO 00/44984) in view of O'Dell et al., Mafoti et al. and Shirono et al. and Jaisle et al. (US 4,473,613). Mafoti et al. is a newly cited reference.

It is the Examiner's position that Döhring ('984) is directed to decorative papers that are impregnated with an amino resin and particles that are useable in laminates, and that Shirono et al. is directed to decorative papers that are impregnated with an amino resin and particles. The Examiner has characterized the teachings of the newly cited Mafoti et al. as "teaching a decorative paper for a laminate panel *containing particles including an amino-silane adhesion promoter* for increasing the bonding strength between members". The Examiner contends that it would have been obvious to use an amino silane adhesion promoter as taught by Mafoti et al., Shirono et al. and O'Dell in Döhring in order to provide a paper having particles with increased adsorption capacity and stronger bonds for an aesthetic laminate having better initial wear resistance. In response to the arguments previously submitted by Applicants, the Examiner states "even if one does not look to Shirano one can look to Mafoti which teaches the same type of amino-silane adhesion promoter as claimed and taught by Shirano."

Applicant respectfully disagrees with the Examiner's contention. Shirono et al. is directed to a surface modified fine silica powder used to produce an ink receptive layer. According to Shirono et al., the surface modified silica powder adsorbs an "anion source compound", wherein the "anion source compound" may be "the sulfonate or the

carboxylate", preferably "sodium benzenesulfonate" (column 3, lines 4-10 of Shirono et al.). Due to the surface treatment, the adsorption amount of these "sulfonates or carboxylates" is increased compared to the original non-treated powder. The aim of Shirono et al. is that by this surface treatment, the silica powder is suitable as a material for improving an "ink acceptor layer" to improve printing materials for ink jet printing processes. As a result, the teachings of Shirono et al. are from a completely different technical field and it is not apparent why the skilled person should refer to this document when trying to improve the teaching of, for example Döhring or O'Dell et al., which deal with the improvement of laminate panels. The advantages mentioned in Shirono et al. with regard to the "increased adsorption amount" have nothing whatsoever to do with the technology of the present invention.

The newly cited Mafoti reference is directed to a polyvinyl acetate emulsion based adhesive that includes tackified polyvinyl alcohol, starch, a tackifier and a coupling agent. The adhesive is disclosed as being particularly useful for bonding melamine formaldehyde paper to particle board. (Col. 4, lines 4-12.) Mafoti et al. discloses that water soluble and dispersible silane, titanium and zirconaluminate coupling agents can be used in the polyvinyl acetate emulsion adhesive formulations. Preferred coupling agents are titanate or zirconaluminate coupling agents. (Col. 10, lines 53-58.) Mafoti et al. further discloses that the coupling agents are preferably used in the range of 1.5-3 percent by weight of the adhesive formulation. *Higher concentrations of coupling agents can reduce the bonding capability of the adhesive formulations.* (Col. 11, lines 13-17.) Mafoti et al. has nothing whatsoever to do with a paper that includes a layer of abrasion-resistant particles having an outer coating of an adhesion promoter.

The claims of the present application are directed to a paper for a laminate panel comprising: a first layer comprising a resin impregnated decorative paper or a resin impregnated overlay; and a second layer of abrasion resistant particles uniformly distributed on and adhered to the first layer, wherein the abrasion resistant particles have an outer coating *consisting of* an amino-silane adhesion promoter. In accordance with the present invention, by coating the abrasion-resistant particles with an adhesion promoter, the thus treated particles integrate better in the resin matrix leading to

optically and mechanically improved surfaces. This concept is not mentioned nor described in the prior art documents of Döhring and O'Dell, and one of ordinary skill could not have predicted these results.

The Döhring reference discloses adding abrasion resistant particles, 20-95 parts, to a particular dispersion containing 100 parts of amino resin, 0.5-2.5 parts of a silane adhesion promoter, 5-25 parts of a flow promoting agent, 0.1-0.4 parts of a wetting agent and 0.05-0.4 parts of a separating agent. The abrasion resistant particles added to this dispersion cannot be *coated* with an adhesion promoter, since the adhesion promoter makes up only 2.5 parts of the dispersion. It appears that the Examiner is of the opinion that the minor quantities of silane adhesion promoter provided in the particular dispersion can lead to a coating of the abrasion resistant particles with the silane adhesion promoter. However, no explanation of how this would be possible has been provided. Independent of the question of how the silane adhesion promoter in the particular dispersion would find its way to the surfaces of the abrasion resistant particles in order to provide a coating thereon, the amount of the silane adhesion promoter in the particular dispersion is so small that a coating of the abrasion resistant particle would not be physically possible.

Similar to the Döhring reference, O'Dell et al. teaches to prepare a particular dispersion containing so called pre-cured resin particles, water, binder material and abrasion-resistant particles. The abrasion-resistant particles of O'Dell et al. are not coated with a silane adhesion promoter as allegedly disclosed in column 6, lines 42-48, since in this passage it is only suggested to add the abrasion-resistant particles to a dispersion or "slurry" comprising a large amount of liquid melamine resin and pre-cured melamine resin particles. O'Dell et al. does not teach to coat any abrasion-resistant particles prior to adding the same to a dispersion containing amino resin.

Neither does the teaching of Shirono et al. provide any hint or information for the skilled person to do so, since Shirono et al. only teaches to surface modify a silica powder to increase the adsorption amount of the anion source compared to non-treated powder in order to provide an improved "printing material for an ink jet printing" as mentioned above. Mafoti et al. teaches a polyvinyl acetate emulsion adhesive that may contain a coupling agent. A combination of the teachings of Döhring, O'Dell, Shirono et

al. and Mafoti et al. can therefore not lead to the subject-matter recited in the present claims.